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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,113	04/14/2006	Phong Nguyen	8029-1082	7429
466	7590	12/12/2008		
YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			EXAMINER SHEDRICK, CHARLES TERRELL	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 12/12/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,113	<b>Applicant(s)</b> NGUYEN, PHONG	
	<b>Examiner</b> CHARLES SHEDRICK	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 8/25/08 have been fully considered but they are not persuasive.
2. Applicant argues that it is well known in the art that error detection and recovery is performed at the Data Link Layer (layer 2).
3. In response, the Examiner notes that the above argument does not suffice to show that error detection is not also handled at the physical layer. The Examiner respectfully submit that it is also well known that error detection is also handled at the Physical layer (layer 1).
4. Applicant argues that 3GPP, lines 13-15 does not state that error detection is performed at the Physical Layer. The Applicant acknowledges that the 3GPP does discuss the appending of CRC bits on the signals sent to the UE (See 3GPP Fig. 4, page 14), but such an attachment of cyclical redundancy check bits is not the same as performing the check on the receiving node. Further, 3GPP does not mention sending an ACK/NACK, but instead states that lack of transmitting a HI (See 3GPP first full paragraph, page 15) is interpreted as a DTX. The Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references **themselves or in the knowledge generally available to one of ordinary skill in the art**, Note that 3GPP teaches HS-SCCH is a physical channel and the associated coding and decoding operations in HSDPA part of the physical channel specifications in Pgs.13-15). Based on the manner in which the claims are written there is nothing in the language that is not anticipated by the prior art with the

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exception of the layer at which it was performed, however the secondary teachings are provided to show desirability of such functionality at the physical layer. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Fukui that teaches transmitting control information from a first station to a second station(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2); commencing receipt of the control information at the second station(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2); checking whether the control information was received with error(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2); and if so, generating a negative acknowledgment (NACK) message for transmission to the first station(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2), wherein the control information error checking and acknowledgment message generating is performed at the second station (e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2) to include carry out processing operations within the radio interface layer for the purpose of efficiency. Fukui teaches that the generation of a NACK message immediately failed after a failed CRC check. If this CRC check is performed at the physical layer (i.e., layer 1) it would be obvious for a person of ordinary skill in the art to also generate a NACK within this layer. The only alternative to it would be to inform the MAC about the failed HS-SCCH decoding, the MAC layer should then command the physical layer to send a NACK message. This alternative would imply a clear waste of time and would add unnecessary complexity to the interlayer communication. **Applicant argues in regards to claim 5**, that the control information is not transmitted and received on a common control channel. See page 2, lines 30-32 of Fukui,

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wherein it states that the UE receives data on a plurality of channels (i.e. HS-SCCH "high-speed shared control channel").

The Examiner respectfully submits that the Applicant carefully note the claim language requirement that the control channel is non specific and broad (i.e., the only requirement is that the control channel have a "common" reference). Therefore, the prior art would still read on the limitation based on the claim language.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukui EP 1353467

A1 in view of TR 25.858 v1.1.0, R1-02-0435, 3GPP TSG RAN WG1 Meeting 23, hereinafter, "3GPP".

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Consider **claims 1 and 7**, Fukui teaches a system and a method of Automatic Repeat request (ARQ) control in a High Speed Downlink Packet Access (HSDPA) communication system(e.g., see **paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2**), the method including:

transmitting control information from a first station to a second station(e.g., see **paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2**); commencing receipt of the control information at the second station(e.g., see **paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2**); checking whether the control information was received with error(e.g., see **paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2**); and if so, generating a negative acknowledgment (NACK) message for transmission to the first station(e.g., see **paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2**), wherein the control information error checking and acknowledgment message generating is performed at the second station (e.g., see **paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2**)

However, Fukui does not specifically teach carrying out processing operations within radio interface layer 1.

In analogous art, 3GPP teaches HS-SCCH is a physical channel and the associated coding and decoding operations in HSDPA part of the physical channel specifications (**Pg.13-15**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Fukui to include carry out processing operations within the radio interface layer for the purpose of efficiency. Fukui teaches that the generation of a NACK message immediately failed after a failed CRC check. If this CRC check is performed at the physical layer it would be obvious for a person of ordinary skill in the art to also generate a

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NACK within this layer. The only alternative to it would be to inform the MAC about the failed HS-SCCH decoding, the MAC layer should then command the physical layer to send a NACK message. This alternative would imply a clear waste of time and would add unnecessary complexity to the interlayer communication.

Consider claims **2 and 8 and as applied to claims 1 and 7**, Fukui as modified by 3GPP teaches wherein the control information error checking is carried out by performing a cyclic redundancy check on the control information(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2).

Consider claims **3 and 9 and as applied to claims 1 and 7**, Fukui as modified by 3GPP teaches wherein the control information error checking is carried out during receipt of an associated data packet(e.g., as a function of HDSPA see at least paragraphs 0003-0005).

Consider claims **4 and 10 and as applied to claims 1 and 7**, Fukui as modified by 3GPP teaches terminating receipt of the associated data packet at the second station upon failure of the control information error checking by carrying out processing operations within radio interface layer 1(e.g., as a function of HDSPA see at least paragraphs 0003-0005, 3GPP provides processing at the physical layer and therefore claims 4 and 10 are rejected based on the motivation as noted in the independent claims 1 and 7).

Consider claims **5 and 11 and as applied to claims 4 and 10**, Fukui as modified by 3GPP teaches wherein the control information is transmitted and received on a common control channel(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2).

Consider claims **6 and 12 and as applied to claims 1 and 7**, Fukui as modified by 3GPP teaches transmitting the negative acknowledgment (NACK) message from the second station to

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the first station on the common control(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2)

Consider claims **13 and 14 and as applied to claims 2 and 8**, Fukui as modified by 3GPP teaches wherein the control information error checking is carried out during receipt of an associated data packet(e.g., see paragraphs 0003-0005 and paragraph 0010 see also figures 1 and 2).

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles Shedrick/  
Examiner, Art Unit 2617

/Lester Kincaid/

Supervisory Patent Examiner, Art Unit 2617